SETA BioMedicals
Fluorescent Tools for BioMedical Applications

http://www.setabiomedicals.com
e-mail: info@setabiomedicals.com

# *Product number:* K8-1696
# *Product name:* Seta-633-Azide

## General Data

| | |
|---|---|
| ***Molecular Mass:*** | 997.15 |
| ***Solubility:*** | Water, alcohol, DMF, DMSO |
| ***Insoluble:*** | Acetone, chloroform, toluene |
| ***Storage:*** | Store in absence of light, desiccated and refrigerate |

## Description

- Highly hydrophilic, alkyne-reactive, long-lifetime fluorescent reagent for click chemistry containing one azide function. Azides react with C≡C-triple bonds in either a Cu(I)-catalyzed or Cu-free 1,3-dipolar cycloaddition reaction to triazole.

## Applications

- Click Chemistry reagent
- Fluorescence intensity and fluorescence polarization-based applications
- Resonance Energy Transfer (RET)

## Advantages

- Perfectly suited for excitation with the 633 or 635-nm diode lasers
- Sensitive; high extinction coefficients and high quantum yields after covalent attachment to biomolecules
- Quantum yield is highly increased after covalent and non-covalent association with proteins
- pH-insensitive between pH 3 and pH 10
- **Good aqueous solubility**: this label does not alter the solubility of the bioconjugate
- **Photostability:** Higher photostability as compared to **Alexa Fluor™ 647** or **Cy5™**
- **Low molecular weight**: **Seta** dyes do not add substantial mass to the conjugates
- Ideal for non-radioactive labeling of alkyne-modified proteins, DNA and oligonucleotides

## Spectral Data

***Solvent System:*** phosphate buffer pH 7.4

| Sample | Absorption max. [nm] | Extinction Coefficient [$M^{-1}cm^{-1}$] | Fluorescence max. [nm] | Quantum Yield[1] [%] |
|---|---|---|---|---|
| **Free dye** | 633 | 250,000 | 644 | 7 |

[1] Excitation at 600 nm

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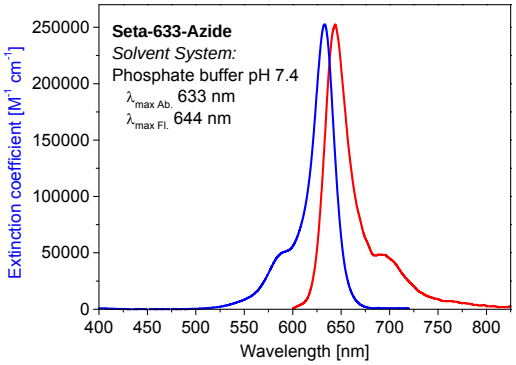
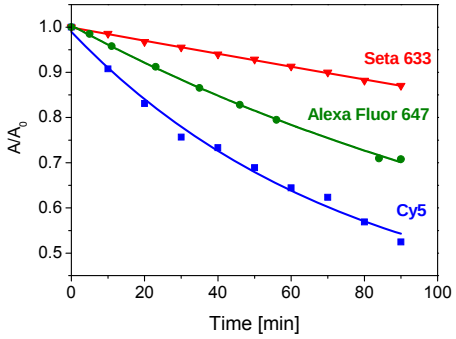



Absorption and emission spectrum
of a **Seta-633-Azide** in phosphate buffer (pH 7.4)

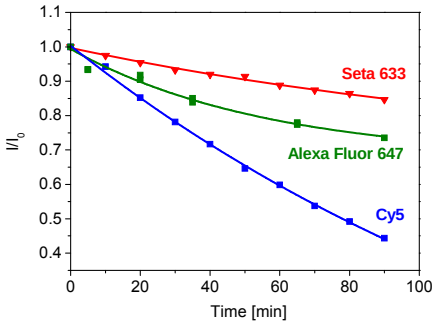
## Photostability

when exposed to light from a halogen lamp (500 W)

***Solvent System:*** phosphate buffer pH 7.4




Relative decrease of the absorption maximum
of **Seta-633** as compared to **Cy5** and **Alexa Fluor 647**




Decrease of the fluorescence intensity
of **Seta-633** as compared to **Cy5** and **Alexa Fluor 647**